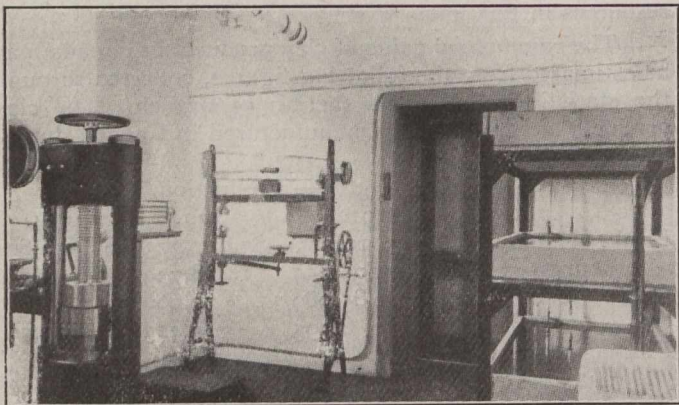
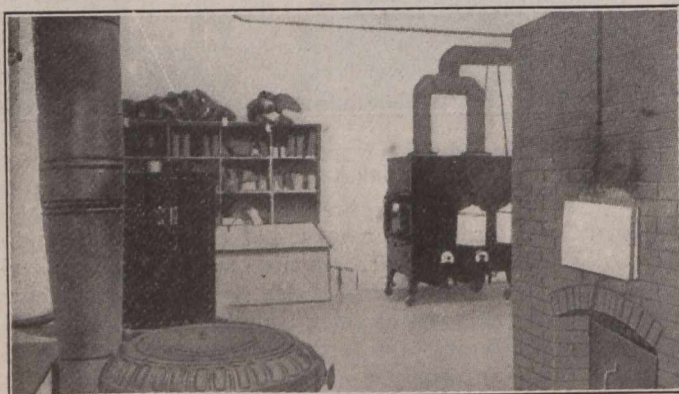


with the request that they state what use can be made of the material. To merely send the owner of the deposit a chemical analysis of his clay does not meet the case, since chemical analysis is only a preliminary step in ascertaining the fitness or unfitness of a clay for the manufacture of any special product. Before a sound opinion can be arrived at, as to whether a particular specimen of clay is suitable for the manufacture of tiles, brick, terra cotta,



Structural Materials Laboratory, Showing Compression and Tension Machines.

sewer pipe, or other clay products, the specimen must be submitted to a physical examination to ascertain the character of the product as it comes from the kiln. It is during this investigation that the problem, in many cases, admits of solution, namely, how a clay, otherwise unfit, may, by special treatment, be rendered suitable for the manufacture of a commercial product. To enable the government to furnish this complete information regarding clays submitted by prospective operators of clay deposits, provision was made for the establishment of a ceramic division in the Mines Branch, with a properly trained and experienced ceramic specialist in charge. The completion and equipment of the ceramic laboratory was accomplished during the latter part of 1915. Through the activities of this Division, intelligent assistance will be given to the manufacturers of clay products. It is ex-



Ceramic Laboratory—Kiln Room, Showing Cement and Brick Kilns.

pected that this course will lead, on the one hand, to a decrease in the large imports of clay products, and on the other hand, tend to the further development and increasing importance of the ceramic industry in the Dominion.

Another laboratory, that for testing structural materials, was equipped with apparatus which would make a more thorough study of materials possible than had

been heretofore, as a physical test had been the only means of examination.

In equipping this laboratory, adequate provision was made for conducting complete tests on all kinds of building supplies, etc., such as sands, brick, stones, cement, concrete, and like materials. The laboratory equipment includes machines for making all the physical tests necessary for the determination of the transverse, tensile, and compression strength of all structural materials. The installation of the machines for testing iron and steel is complete.

The increasing use of bituminous materials in the surfacing of city streets and interurban highways, has emphasized the necessity for apparatus suitable for the testing of such materials; but in connection with the installation of apparatus for the examination of bituminous road materials—including bituminous sand—there has been a regrettable absence of generally accepted standard methods of testing. The apparatus available in the Mines Branch Structural Materials Testing Laboratory, however, is well suited for classifying, and for determining the value of bituminous road materials.

THE ERIE RAILROAD LIBRARY.

The Erie Railroad has opened at its general office in New York City a free circulating and reference library for the use of the 1,300 persons employed in the offices of the company in that building and nearby. On the day that the library was opened, March 14th, the shelves were almost swept clear of the several hundred volumes which had been provided, and a "rush order" was sent out for more books. The demand was keen from all classes of employees, from girls who count tickets in the auditing department up to the higher officers.

The library, which is described in *Railway Age Gazette*, consists of standard text books and reference works, engineering and technical books of interest to railroad men, and also the latest popular fiction, together with current periodicals and newspapers. Employees in all departments will here find facilities to educate themselves in their own work, and also to inform themselves concerning other departments of the railway service. The library contains about 1,000 books.

The demand for steel from domestic consumers is increasing instead of falling off and Europe is in the market for almost unheard of tonnages for shell purposes and for railway steel. There is no doubt in the minds of manufacturers that prices will go higher than ever seen before.

The busiest street intersection in the world is in New York City at Fifth Ave. and 42nd St., according to a recent count by the Traffic Committee of the Fifth Avenue Association. According to this investigation, between 3.30 and 4.30 p.m. on the day of the test, 1,149 vehicles were counted proceeding south. J. Bernstein, who made the count for the committee, stated that the top figure for the Strand, London, is 900 vehicles per hour, and in Paris the record is 600 in an hour on the Boulevard des Capucines. The count revealed other interesting statistics: Of the vehicles on Fifth Ave. at 42nd St. 92 per cent. are now motor-driven. Between 8.30 a.m. and 6.30 p.m., under unfavorable weather conditions, 7,762 passenger vehicles were counted northbound, of which 300 were commercial (of these 60 per cent. were horse-drawn), while 600 busses passed in the 10 hours. The grand total was 8,862. The traffic peak was between 2.30 and 3.30 p.m. Southbound in the avenue the total for the day was 7,190, consisting of 6,388 passenger vehicles, 198 commercial and 604 busses. On 42nd St. the total from east to west was 4,716; and from west to east, 3,909.